

REMARKS

I. Status of Claims

Upon entry of the Amendment, which is respectfully requested, claims 1-11 and 14-16 will be pending in the application.

Claim 1 has been amended to recite that Rf is a linear or branched perfluoroalkyl or perfluoroalkenyl group having one to six carbon atoms. Support for the amendment can be found at page 5, lines 9-14 of the present specification.

Claim 2 has been amended to more precisely recite that the fluoropolymer comprises repeating units derived from a fluorine-containing monomer and repeating units from a silicon-containing monomer.

Claims 10 and 12-13 have been canceled without prejudice or disclaimer. Applicants reserve the right to file a divisional application directed to the canceled subject matter.

No new matter is added.

II. Information Disclosure Statement

Applicants thank the Examiner for returning an initialed copy of Form PTO/SB/08 filed with the Information Disclosure Statements of November 1, 2006, thereby indicating that the references listed therein have been considered.

Applicants respectfully request the Examiner is to again return Form PTO/SB/08 for the Information Disclosure Statement filed December 7, 2005 and indicate that "All references considered except where lined through," which is absent in the copy of Form PTO/SB/08 attached to the Office Action dated May 20, 2008.

III. Response to Rejection Under 35 U.S.C. § 112

Claims 2-6 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite in describing the fluoropolymer of claim 2 as containing unreactive monomers.

In response, claim 2 has been amended to more precisely recite that the fluoropolymer comprises repeating units derived from a fluorine-containing monomer and repeating units derived from a silicon-containing monomer.

It is respectfully submitted that the claims as amended fully comply with 35 U.S.C. § 112, and withdrawal of the foregoing rejection is respectfully requested.

IV. Response to Rejection Under 35 U.S.C. § 102

Claims 1-3, 5-6, 10-11 and 14 were rejected under 35 U.S.C. §102(b) as being anticipated by Inukai (U.S. Patent No. 5,128,389).

Applicants respectfully traverse.

Amended claim 1, is directed to a surface treatment agent comprising a fluoropolymer which has repeating units derived from a fluorine-containing monomer of Formula (I), where R_f is a linear or branched perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms.

In contrast, Inukai describes that R² in a corresponding position is a fluorine-containing alkyl group, alkenyl group or ether group. See column 2, lines 26-27 of Inukai. Additionally, Example 1 of Inukai describes hexafluoroneopentyl α -fluoroacrylate. The hexafluoroneopentyl group is not a perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms, as presently claimed.

Therefore, Inukai does not teach each and every element of amended claim 1 such that the rejected claims are not anticipated by Inukai. Claims 2-3, 5-6, 10-11 and 14 are also distinguishable over Inukai, at least by virtue of their dependence from claim 1.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the §102 rejection based on Inukai.

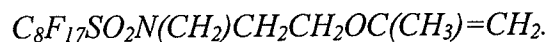
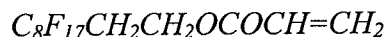
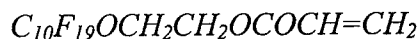
V. Response to Rejection Under 35 U.S.C. § 103

Claims 1-11 and 14-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP '472 (JP 63-101472) in view of Ohmori (U.S. Patent No. 5,021,501).

Applicants respectfully traverse.

The present Applicants provide an English language translation of the passage of JP '472 at page 2, line 13 to page 3, line 7, as follows:

The fluorinated water and oil repellant, which is one essential component in the water and oil repellent treating agent, is a homopolymer of a vinyl monomer having a C₄ to C₁₈ fluoroalkyl or fluoroalkenyl group, or a copolymer of said vinyl monomer and a fluorine-free vinyl monomer. Representative examples of said vinyl monomer having a C₄ to C₁₈ fluoroalkyl or fluoroalkenyl group include the following:



JP '472 further discloses that a carbon atom at the α-position of a carbonyl group has only H or CH₃, as described above by the five chemical formulae. However, JP '472 does not disclose or suggest substitution of H or CH₃ at the α-position by a fluorine atom, as

required by present claim 1. In the present invention, substitution at the alpha-position is essential for providing the effects of the invention.

Ohmori, at column 2, lines 49-55, discloses examples of fluorine-containing monomers, which include monomers having a perfluoroalkyl or perfluoroalkenyl group having at least 7 carbon atoms, in addition to monomers having the perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms defined in the present claim 1. Ohmori does not distinguish the monomer having a perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms from the monomer having a perfluoroalkyl or perfluoroalkenyl group having at least 7 carbon atoms. Furthermore, working Examples of Ohmori do not disclose the perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms. Thus, Ohmori does not disclose or suggest the importance of the perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms.

In the present invention, the combination of (i) the perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms and (ii) the substitution at the α -position in the fluorine-containing monomer can give the advantageous effects of the present invention (that is, excellent water and oil repellency, soil resistance while keeping the feeling of textile, cf., for example, page 3, lines 1-6 of the English Description).

Neither of JP '472 nor Ohmori discloses or suggests that the combination of the perfluoroalkyl or perfluoroalkenyl group having 1 to 6 carbon atoms and substitution at the α -position in the fluorine-containing monomer can give excellent water and oil repellency, soil resistance while keeping the feeling of textile which can be achieved in the present invention.


In view of the above, Applicants submit that the present invention is not obvious over JP '472 in view of Ohmori. Therefore, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. § 103.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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CUSTOMER NUMBER

Date: September 19, 2008

Partial translation of JP63-101472

(page 2, right lower column, line 13 to page 3, left upper column, line 7)

The fluorinated water and oil repellant, which is one essential component in the water and oil repellent treating agent, is a homopolymer of a vinyl monomer having a C₄ to C₁₈ fluoroalkyl or fluoroalkenyl group, or a copolymer of said vinyl monomer and a fluorine-free vinyl monomer. Representative examples of said vinyl monomer having a C₄ to C₁₈ fluoroalkyl or fluoroalkenyl group include the following:

